



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/656,170 | 09/06/2000 | Motoyasu Taguchi | 071671/0155 | 8925 |
| 22428 | 7590 | 11/30/2005 | EXAMINER | |
| FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007 | | | LIU, SHUWANG | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2634 | |

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 09/656,170 | | TAGUCHI, MOTOYASU | |
| | Examiner | | Art Unit | |
| | Shuwang Liu | | 2634 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-15 and 17-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-15,17-19 and 22 is/are rejected.
- 7) ☒ Claim(s) 20 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Request for Continued Examination

1. The request filed on September 08, 2005, for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 09/656,170 acceptable and a RCE has been established. An action on the RCE follows.

Response to Arguments

2. Applicant's arguments with respect to claims 1-4, 8, 11-15, 19 and 22-24 have been considered but are moot in view of the new ground(s) of rejection because of the amendment.

Claim Objections

3. Claims 2-4, 8, 13-15, 19, and 24 objected to because of the following informalities:

(1) In claims 2-4, and 13 -15, line 2, insert - -an- - before "operation", respectively;

(2) In claims 8 and 19, line 2, change "a" to - -the- -, respectively;

(3) In claims 8 and 19, line 3, delete "data of" before "said" and "the" after "demodulates", respectively;

(4) In claims 8 and 19, line 4, insert - -correlated" between "demodulated" and "data", respectively;

(5) In claim 24, line 3, insert - -of each- - after "level" and change "received signal" to - -received signals- -;

Art Unit: 2634

(6) In claim 24, line 6, insert - -received- - before "signal from"; and

(7) In claim 24, line 7, insert - -according to a result of the judging the electric field level of each of the received signals- - after "time".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 8, 11-15, 19, and 22-24 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Sudo et al. in view of Nakajima et al. (US 5,487,083).

As discloses in figures 1-13, Sudo et al. discloses:

(1) regarding claims 1, 8, 12 and 19:

a receiving terminal for CDMA system comprising:

a finger circuit (figure 1) having a plurality of finger circuit elements (40 and figure 13), each of said plurality of finger circuit element (see 402-407 in figure 13) for making between a correlation of a received signal from a radio circuit connected to an antenna (connected with 3) and a known signal (PN in figure 13) and for outputting a correlated

Art Unit: 2634

received signal as result of the correlation (see figure 13) (column 11, lines 50-column 14, lines 9); and

a rake circuit (40-48 and 409 in figure 13) for combining the correlated received signals output from the plurality of finger circuit elements (402, 404 and 406) (column 8, line 25-column 11, line 27);

wherein the rake circuit includes a level judgment circuit for executing electric field level judgment based on the despreading signals output from the plurality of finger circuit elements and a predetermined threshold level (column 8, line 25-column 11, line 27, column 12, lines 50-61 and column 13, lines 20-67), and

wherein an operation of at least one finger circuit element can be suspended for a fixed, predetermined time period according to the result of the level judgment (column 8, line 25-column 11, line 62).

Sudo disclose all of the subject matter as described above except for specifically teaching the level judgment based on the correlated received signals instead of the despreading signals.

Nakajima et al., in the same field of endeavor, teaches that the despreading with PN code is a correlation (column 6, lines 1-37).

It is well known that the judging whether the maximum value of the despreading envelope is same as judging the correlation signal level. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to understanding of the correlation taught by Nakajima et al., which is the despreading of Sudo et al. In

Art Unit: 2634

doing so, the receiver can perform the demodulation function in the spread spectrum system.

Furthermore,

(2) regarding claims 2, 11, 13, and 22-24:

wherein operation of a control clock supply to the at least one finger circuit element (or a circuit, which is making a correlation between a received signal that is judged to have a low electric field level and a known signal) is suspended for a fixed, predetermined period time for power consumption reduction according to the result of the electric field level judgment by the level judgment circuit (column 8, line 25-column 11, line 62).

(3) regarding claims 3 and 14:

wherein operation of a control clock supply to a timing circuit in the at least one finger circuit element is suspended according to the result of the electric field level judgment by the level judgment circuit (column 8, line 25-column 11, line 62).

(4) regarding claims 4 and 15:

wherein operation of a control clock supply is suspended after the lapse of a predetermined period of time (column 8, line 25-column 11, line 62).

6. Claims 6, 7, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sudo et al. and Nakajima et al. as applied above in claims 1 and 12, further in view of Ishikura (US 5,239,684).

Art Unit: 2634

Sudo and Nakajima et al. disclose all of the subject matter as described above except for specifically teaching a memory which is an E2PROM, and threshold data therefrom is supplied under CPU control to the lake circuit as claimed.

Ishikura et al., in the same field of endeavor, teaches a memory (107 in figure 1 and 2), which is an E2PROM, and threshold data therefrom is supplied under CPU (161 in figure 2) control to a circuit (column 4, lines 11-12 and column 8, lines 56-66).

It is well known that the area of an E2PROM cell is about one fifth of the area of a SAR cell so the area required by a given RAM on the semiconductor chip is greatly reduced, or RAM storage capacity can be increased. Furthermore, E2PROM setting value can be updated easily. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to employ E2PROM as taught by Ishikura to store threshold value of the receiver of Sudo et al. in order to update stored value easily.

Allowable Subject Matter

7. Claims 20 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2634

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shuwang Liu whose telephone number is 571 272-3036. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shuwang Liu
Primary Examiner
Art Unit 2634

November 28, 2005